

Kentucky Retirement Systems Overview



Presented to:

***KRS Pre-Retirement
Education Programs***

August-September 2015

Transparency / KRS Web Site

- **Address:** www.kyret.ky.gov

- **Information available:**

Latest Investment Performance Information and News

Investment Consultant Reports (new)

Board and Staff Contact Information

10 years of Actuarial Valuations

10 years of Comprehensive Annual Financial Reports

10 years of Annual Audited Financial Statements

KRS Bylaws and Board Adopted Policies

Committee Assignments

Board and Committee Meeting Dates, Agendas, and Minutes

Investment Holdings and Commissions

Sections for Actives and Retirees

..... and more

Kentucky Retirement Systems (KRS) Facts

- **KRS administers retirement benefits for over 348,000 state and local government employees**
 - These employees include state employees, state police officers, city and county employees, local agency employees, and nonteaching staff of local school boards and regional universities.
- **KRS administers three plans:**
 - Kentucky Employees Retirement System (KERS)
 - KRS 61.510 to 61.705 and KY Administrative Regulations, Title 105
 - County Employees Retirement System (CERS)
 - KRS 78.510 to 78.852 and KY Administrative Regulations, Title 105
 - State Police Retirement System (SPRS)
 - KRS 16.505 to 16.652 and KY Administrative Regulations, Title 105

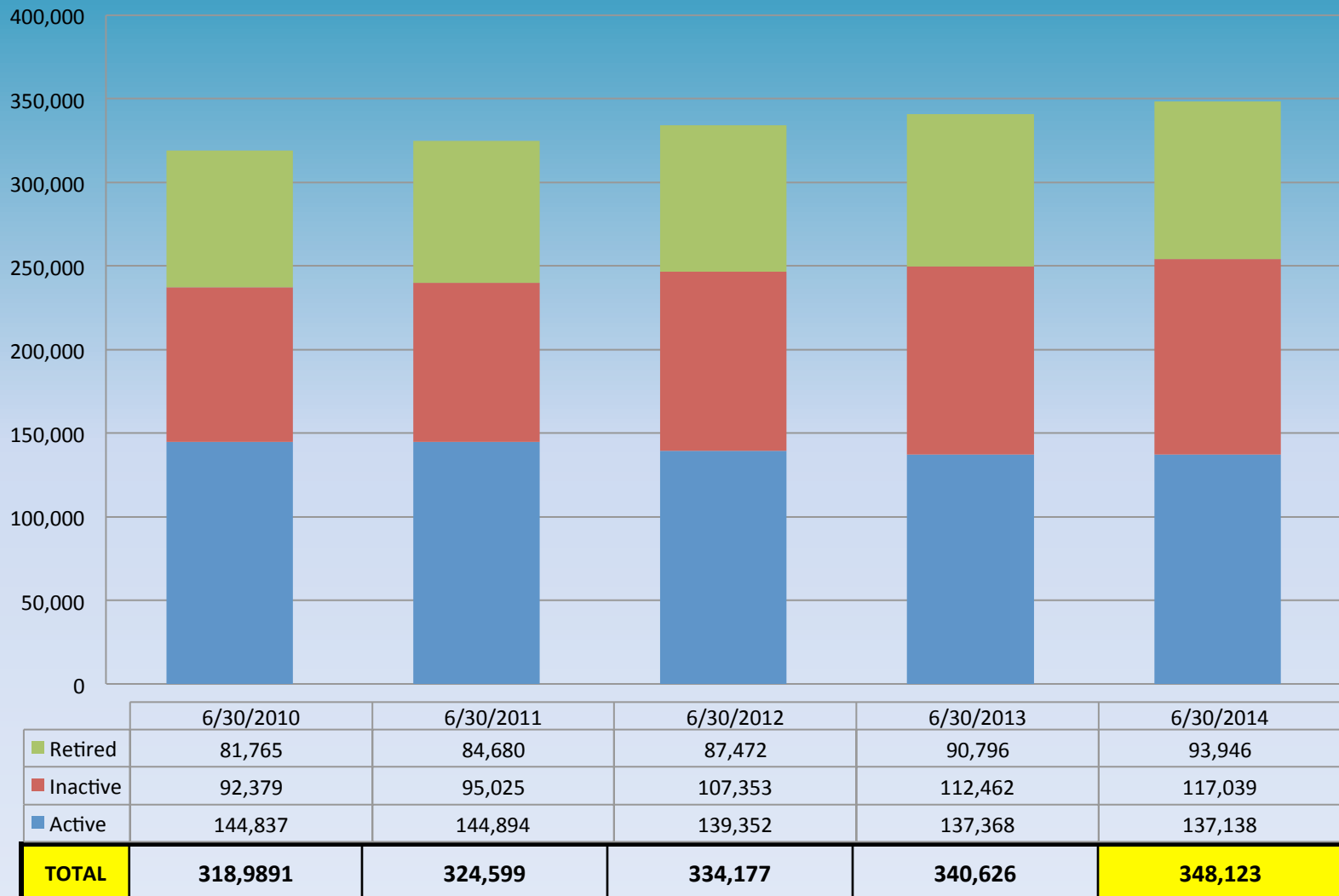
Plan Administration

- **A thirteen-member Board of Trustees administers the Systems:**
 - Two trustees elected by KERS members
 - Three trustees elected by CERS members
 - One trustee elected by SPRS members
 - Six trustees appointed by the Governor
 - *One must be knowledgeable about the pension requirements on local governments*
 - *Two must have at least 10 years of investment experience*
 - *One each from lists of nominees submitted by the KY League of Cities, the KY Association of Counties, and the KY School Boards Association*
 - The Secretary of the Kentucky Personnel Cabinet, *ex officio*
- **The Board appoints an Executive Director to act as the Chief Administrative Officer of the Board**
- **KRS reports for budget purposes to the Kentucky General Assembly**

Plan Administration

- **The following standing committees are created in the bylaws of the KRS Board of Trustees:**
 - Administrative Appeals Committee
 - Disability Appeals Committee
 - Audit Committee
 - Investment Committee
 - Legislative and Budget Committee
 - Human Resources Committee
 - Retiree Health Committee
 - Legal, Compliance and Governance Committee
- **The members and the chair of each standing committee are appointed by the chair of the KRS Board of Trustees**
- **The chair of the KRS Board of Trustees or the Board may also create *ad hoc* committees, as needed**

KRS Membership (2010 – 2014)

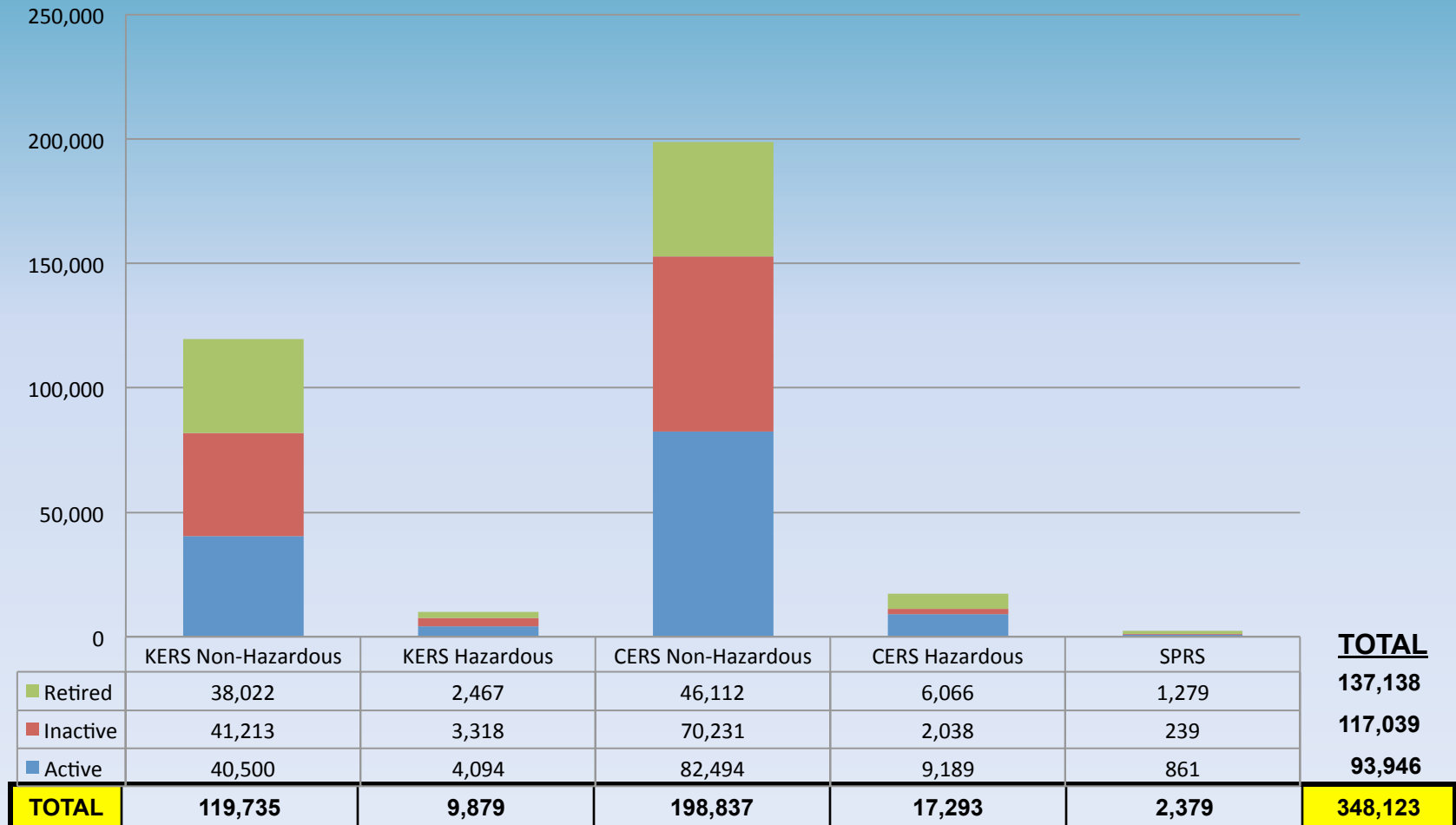


Source: June 30, 2014 Comprehensive Annual Financial Report (CAFR)

KRS Membership by System and Status

of June 30, 2014

As



Source: June 30, 2014 Comprehensive Annual Financial Report (CAFR)

KRS Current Assets and Benefit Payments

- As of June 30, 2015, the (unaudited)market value of KRS assets (pension and insurance) was **\$15.70 billion**
- KRS pays over **\$2 billion** in pension and insurance benefits each year
 - 95% of benefit payments are delivered to Kentucky residents and have a significant impact on the Kentucky economy

Source: June 30, 2015 Unaudited Financial Statements and Investment Report

Plan Type

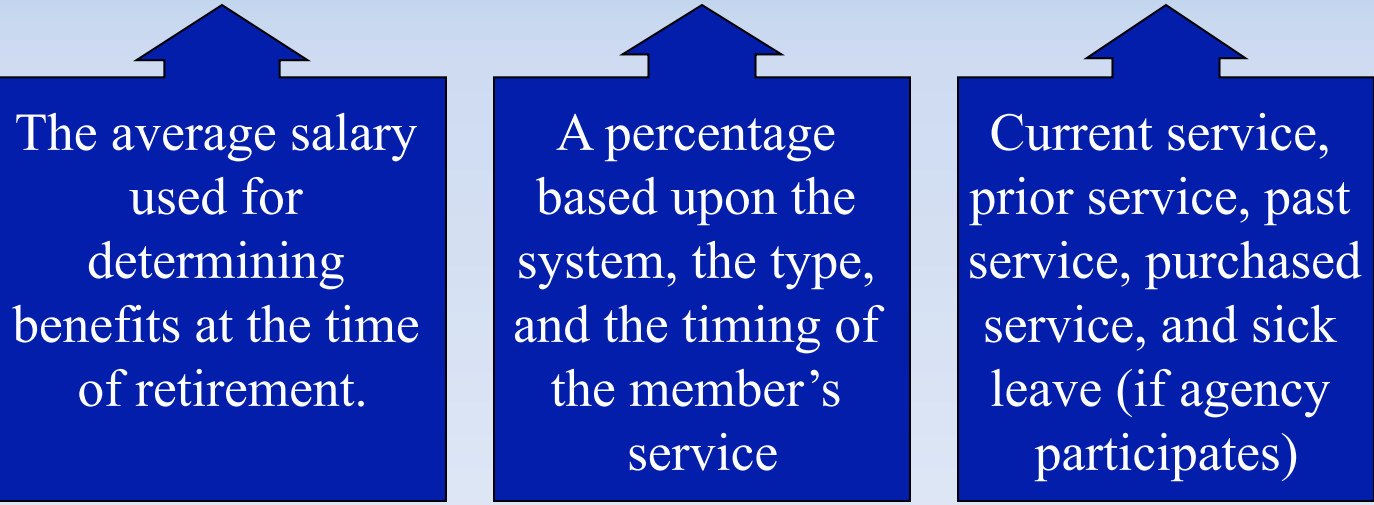
The three systems administered by KRS are
Qualified Public Defined Benefit Plans
established under **Section 401a** of the Internal Revenue Code.

Defined Benefit plans pay pension benefits based on a formula,
while **Defined Contribution** plans (*such as a 401(k) plan*)
pay benefits based on contributions and earnings on those contributions.

Benefit Formula (Statutory)

The KRS formula at full retirement:

$$\text{Final Compensation} \times \text{Benefit Factor} \times \text{Years of Service} = \text{Annual Benefit}$$



The average salary used for determining benefits at the time of retirement.

A percentage based upon the system, the type, and the timing of the member's service

Current service, prior service, past service, purchased service, and sick leave (if agency participates)

Statute References: KRS 61.595; KRS 16.576

Retirement Eligibility – TIER 1

- **Non-Hazardous Members**

*(Participation Date **PRIOR** to September 1, 2008):*

- Normal Retirement

- Age 65 or older with at least one month of service credit but no more than 47 months of service credit may elect to receive a lifetime benefit that is an actuarial equivalent of twice the member's accumulated contributions
 - Age 65 or older with at least 48 months of service credit is eligible to receive an unreduced benefit for life based on the formula
 - A Non-Hazardous member with 27 or more years of service credit may retire at any time *(Unreduced benefit for life)*

Statute References: KRS 61.510(18), 61.559

- Early Retirement

- 25 years of service credit regardless of age
(Reduced benefit for life)
 - Age 55 with 5 or more years of service credit
(Reduced benefit for life)

Statute Reference: KRS 61.559

Retirement Eligibility – TIER 2

- **Non-Hazardous Members**

(Participation Date from September 1, 2008 to December 31, 2013):

- Normal Retirement

- Age 57 or older, if age and years of service equal 87 *(Unreduced benefit for life)*
 - Age 65 or older with at least 60 months of service credit

Statute References: KRS 61.510(18), 61.559

- Early Retirement

- Age 60 or older with at least 120 months of service credit *(Reduced benefit for life)*

Statute Reference: KRS 61.559

Retirement Eligibility – TIER 3

- **Non-Hazardous Members**

*(Participation Date **ON or AFTER** January 1, 2014):*

- Normal Retirement

- Age and years of service equal 87, with minimum age of 57
 - Age 65 or older with at least 60 months of service credit
(Unreduced benefit for life)

Statute References: KRS 61.510(18), 61.597(6)

- No Reduced Benefits

Retirement Eligibility – TIER 1

- **Hazardous Members**

*(Participation Date **PRIOR** to September 1, 2008):*

- Normal Retirement

- 20 or more years of service credit regardless of age *(Unreduced benefit for life)*
 - Age 55 or older with at least one month of hazardous duty service credit but no more than 59 months of service credit may elect to receive a lifetime benefit that is an actuarial equivalent of twice the member's accumulated contributions
 - Age 55 and older with at least 60 months of hazardous duty service credit is eligible to receive an unreduced benefit for life based on the formula

Statute Reference: KRS 16.576

- Early Retirement

- Age 50 with 15 or more years of service credit *(Reduced benefit for life)*

Statute Reference: KRS 16.577, 16.505(20)

Retirement Eligibility – TIER 2

- **Hazardous Members**

(Participation Date from September 1, 2008 to December 31, 2013):

- Normal Retirement

- 25 or more years of service credit
(Unreduced benefit for life)
 - Age 60 and older with at least 60 months of hazardous duty service credit may retire at any time
(Unreduced benefit for life)

Statute Reference: KRS 16.576

- Early Retirement

- 25 years of service credit regardless of age
(Unreduced benefit for life)
 - Age 50 or older with at least 15 years of service credit
(Reduced benefit for life)

Statute Reference: KRS 16.577, 16.505(20)

Retirement Eligibility – TIER 3

- **Hazardous Members**

*(Participation Date **ON or AFTER** January 1, 2014):*

- Normal Retirement

- Age 60 or older with at least 60 months of service credit
 - 25 or more years of service credit regardless of age
(Unreduced benefit for life)

Statute References: KRS 16.505(15), 16.583(6)

- No Reduced Benefits

KRS Health Insurance Benefits for Members Participating PRIOR to July 1, 2003

KRS pays a percentage of the monthly contribution rate for medical insurance coverage based on the retired member's years of service and type of service

Total Non-Hazardous Service	Percent Paid for Retired Member*	Total Hazardous Service	Percent Paid Toward Dependent Coverage**
Less than 4 Years	0%	Less than 4 Years	0%
4 – 9+ Years	25%	4 – 9+ Years	25%
10 – 14+ Years	50%	10 – 14+ Years	50%
15 – 19+ Years	75%	15 – 19+ Years	75%
20 or more Years	100%	20 or more Years	100%

* 100% of the monthly contribution is paid toward health insurance for a retired member in a Non-Hazardous position who is totally disabled from any employment as a result of a duty-related injury, regardless of actual service.

** 100% of the monthly contribution is paid towards the health insurance for a member, member's spouse and dependents, if the member is in a Hazardous position and is disabled in the line of duty as a result of a duty-related injury, regardless of actual service.

KRS Health Insurance Benefits

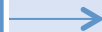
Participation between
July 1, 2003 and August 31, 2008

- Employees must have 10 years of earned service credit

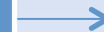
Participation on or after
September 1, 2008

- Employees must have 15 years of earned service credit

Nonhazardous Members
will earn \$10 per month
towards insurance for
each year of earned
service



Hazardous Members will
earn \$15 per month
towards insurance for
each year of earned
service



The \$10 and \$15
contributions will be
increased each year by a
1.5% Cost of Living
Adjustment (COLA)

Analysis of Initial Retirees FY 2013 - 2014

System	Number of Initial Retirees	Average Service Credit (Months)	Average Final Compensation	Average Monthly Benefit	Average System Payment for Health Insurance
KERS Non-Hazardous	2,037	202	\$46,480	\$1,278	\$534
KERS Hazardous	245	165	\$46,595	\$1,296	\$937
CERS Non-Hazardous	3,529	182	\$33,816	\$879	\$486
CERS Hazardous	430	194	\$57,718	\$2,021	\$1,279
SPRS	77	260	\$70,009	\$3,322	\$1,378

Source: June 30, 2014 Comprehensive Annual Financial Report

How is KRS Funded?

- **There are three (3) sources of funding for Kentucky Retirement Systems:**
 - **Employee Contributions:**
 - Set by statute
 - **Employer Contributions:**
 - Set annually by the KRS Board of Trustees based on an independent actuarial valuation and recommendation
 - Contribution paid by KERS and SPRS employers subject to the appropriation amount set forth by the General Assembly in the biennial budget legislation
 - **Return on Investments**
 - The KRS Investment Committee has the authority to make investment decisions and hire external investment managers and consultants
 - KRS utilizes internal investment staff, external investment managers, and independent investment consultants to conduct the investment program

How is KRS Funded?

The Majority of KRS Funding Comes from **Return on Investments**



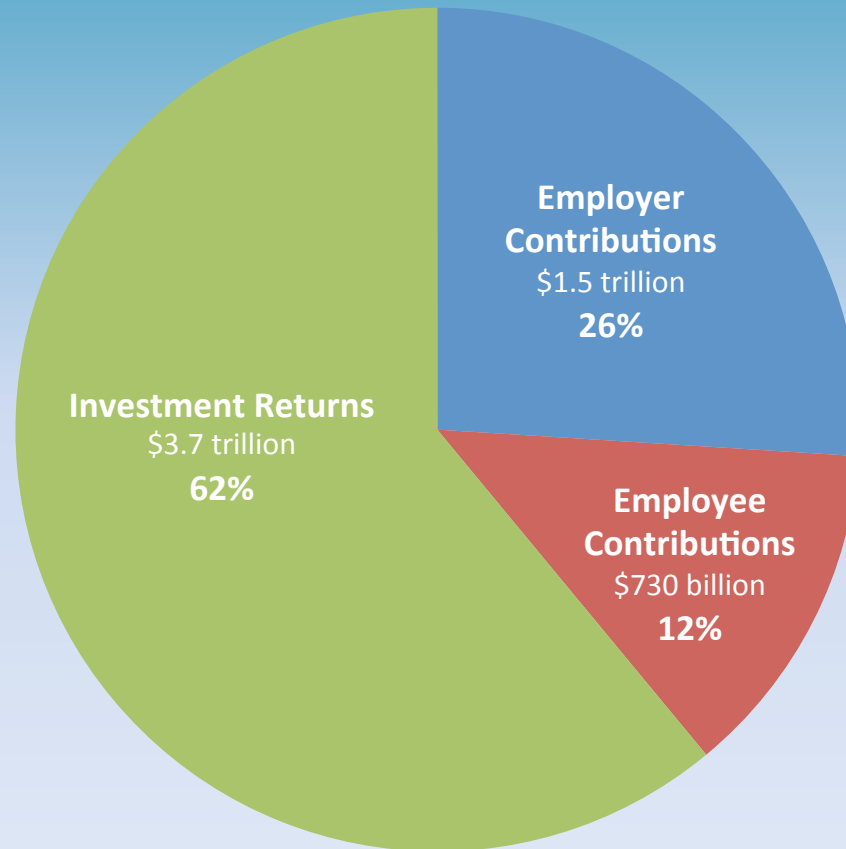
Employee
12%

Employer
20%

Investment Income
68%

Public Pension Fund Revenue Sources

United States, 1984 to 2013



Sources: *US Census Bureau and the National Association of State Retirement Administrators (NASRA Issue Brief: Employee Contributions to Public Pension Plans, February 2015).*

The US Census Bureau first began reporting public pension fund revenue data in 1982.

Employee Contributions

- Account for 12% of KRS funding
- Set by statute as a percentage of creditable compensation

System	Participation Date PRIOR to September 1, 2008	Participation Date ON or AFTER September 1, 2008*
KERS Non-Hazardous	5%	6%
KERS Hazardous	8%	9%
CERS Non-Hazardous	5%	6%
CERS Hazardous	8%	9%
SPRS	8%	9%

* Members with a participation date on or after September 1, 2008 contribute an additional 1% of creditable compensation, which is deposited into the KRS Insurance Fund.

Employer Contributions

- **Set by Board of Trustees based on actuarial analysis and recommendations**
- **Employer Contribution Rate Consists of:**
 - **Pension and Insurance Contribution**
 - **Normal Cost** = The cost of projected benefits allocated to the current year (the year the valuation is conducted)
 - **UAL Payment** = The present value of benefits earned to date that are not covered by current plan assets
 - **Insurance Contribution**
 - Created by 1978 Legislature
 - Made a contractual obligation by 1988 Legislature; taken out of inviolable contract for employees hired on or after July 1, 2003
 - In 2006, GASB 43 and 45 changed the accounting and reporting requirements related to Other Post Employment Benefits (OPEB) for public retirement systems.
 - KRS must now recognize and report on an accrual basis the cost of retiree health insurance benefits over the working life of the employee

Actuarially Required 2015-2016 Employer Contributions

(as a percent of payroll)

System	Pension Normal Cost	Pension Admin. Expense	Payment On Pension UAL	Total Pension Rate	Insurance Normal Cost	Insurance Admin. Expense	Payment on Insurance UAL	Total Insurance Fund	Actuarial Required Rates from 2013 Valuation	Phase-in Rates*
KERS (Non-Hazardous)	3.48%	0.65%	26.71%	30.84%	2.69%	.26%	4.98%	7.93%	38.77%	-
KERS (Hazardous)	5.24%	0.55%	10.58%	16.37%	9.27%	.14%	.56%	9.97%	26.34%	-
SPRS	8.05%	0.41%	45.44%	53.90%	11.91%	.41%	9.54%	21.86%	75.76%	-
CERS (Non-Hazardous)	3.56%	0.79%	8.40%	12.75%	3.32%	.20%	1.83%	5.35%	18.10%	17.67%*
CERS (Hazardous)	6.09%	0.26%	14.38%	20.73%	8.90%	.15%	5.92%	14.97%	35.70%	34.31%*

* The CERS rates reflect the ten-year phase-in of the insurance portion of the rate required by KRS 61.565(6).

Source: June 30, 2013 Actuarial Valuation

KERS Non-Hazardous Members
(20 Year Rate Projections with 2008-2013 Experience Study Assumptions)

Fiscal Year Ending June 30	Contribution Rate			Projected Payroll	Total Contribution	Actuarial Accrued Liability		
	Pension	Insurance	Total			Pension	Insurance	Total
2014	17.29%	9.50%	26.79%	1,674,560,157	448,614,666	11,361,048,136	3,125,330,157	14,486,378,293
2015	30.84	7.93	38.77	1,739,186,468	674,282,594	11,788,258,431	2,299,035,118	14,087,293,549
2016	30.84	7.93	38.77	1,809,980,787	701,729,551	12,075,935,642	2,391,678,677	14,467,614,319
2017	33.50	7.85	41.35	1,883,912,131	778,997,666	12,190,907,376	2,480,347,176	14,671,254,552
2018	33.50	7.85	41.35	1,960,701,412	810,750,034	12,305,217,364	2,565,209,415	14,870,426,779
2019	33.45	7.56	41.01	2,040,408,043	836,771,338	12,418,010,902	2,646,778,291	15,064,789,193
2020	33.45	7.56	41.01	2,123,708,179	870,932,724	12,529,839,090	2,725,398,537	15,255,237,627
2021	33.26	7.25	40.51	2,211,329,318	895,809,507	12,639,629,068	2,800,081,345	15,439,710,413
2022	33.26	7.25	40.51	2,303,013,317	932,950,695	12,747,540,392	2,871,881,852	15,619,422,244
2023	33.06	6.96	40.02	2,398,610,115	959,923,768	12,854,229,406	2,940,723,808	15,794,953,214
2024	33.06	6.96	40.02	2,498,465,540	999,885,909	12,959,562,602	3,005,911,590	15,965,474,192
2025	32.88	6.70	39.58	2,603,013,460	1,030,272,727	13,063,633,311	3,066,779,331	16,130,412,642
2026	32.88	6.70	39.58	2,711,479,401	1,073,203,547	13,166,879,962	3,121,720,447	16,288,600,409
2027	32.71	6.46	39.17	2,823,351,564	1,105,906,808	13,269,801,111	3,170,314,054	16,440,115,165
2028	32.71	6.46	39.17	2,938,771,062	1,151,116,625	13,370,066,917	3,211,372,408	16,581,439,325
2029	32.62	6.27	38.89	3,058,349,042	1,189,391,942	13,467,355,016	3,243,668,646	16,711,023,662
2030	32.62	6.27	38.89	3,182,829,685	1,237,802,464	13,560,600,137	3,264,812,495	16,825,412,632
2031	32.57	6.11	38.68	3,312,825,741	1,281,400,997	13,648,449,683	3,273,766,840	16,922,216,523
2032	32.57	6.11	38.68	3,449,155,335	1,334,133,284	13,730,209,900	3,268,681,901	16,998,891,801
2033	32.57	5.96	38.53	3,591,702,150	1,383,882,838	13,807,611,081	3,250,401,702	17,058,012,783

CERS Non-Hazardous Members
(20 Year Rate Projections with 2008-2013 Experience Study Assumptions)

Fiscal Year Ending June 30	Contribution Rate			Projected Payroll	Total Contribution	Actuarial Accrued Liability		
	Pension	Insurance	Total			Pension	Insurance	Total
2014	13.74%	5.15%	18.89%	2,278,784,893	430,462,466	9,139,567,695	2,370,771,288	11,510,338,983
2015	12.75	4.92	17.67	2,363,156,714	417,569,791	9,800,456,616	2,574,442,904	12,374,899,520
2016	13.27	5.12	18.39	2,448,674,051	450,311,158	10,110,614,414	2,728,031,352	12,838,645,766
2017	13.08	5.32	18.40	2,537,008,837	466,809,626	10,428,537,480	2,877,674,757	13,306,212,237
2018	13.09	5.52	18.61	2,627,667,574	489,008,936	10,750,343,098	3,022,663,038	13,773,006,136
2019	12.94	4.45	17.39	2,721,226,397	473,221,270	11,074,809,126	3,162,199,787	14,237,008,913
2020	12.87	4.27	17.14	2,818,583,254	483,105,170	11,400,612,872	3,296,092,517	14,696,705,389
2021	12.82	4.12	16.94	2,920,704,537	494,767,349	11,725,548,970	3,423,092,132	15,148,641,102
2022	12.79	3.99	16.78	3,027,364,539	507,991,770	12,047,277,180	3,543,272,866	15,590,550,046
2023	12.74	3.88	16.62	3,138,573,746	521,630,957	12,365,871,012	3,656,535,930	16,022,406,942
2024	12.71	3.75	16.46	3,255,021,273	535,776,502	12,680,465,683	3,762,355,511	16,442,821,194
2025	12.69	3.63	16.32	3,376,205,969	550,996,814	12,990,531,074	3,860,177,600	16,850,708,674
2026	12.67	3.52	16.19	3,501,396,338	566,876,067	13,294,616,232	3,948,899,833	17,243,516,065
2027	12.66	3.42	16.08	3,630,388,564	583,766,481	13,589,632,450	4,028,215,720	17,617,848,170
2028	12.67	3.32	15.99	3,763,909,622	601,849,149	13,873,526,803	4,097,292,973	17,970,819,776
2029	12.70	3.22	15.92	3,903,330,300	621,410,184	14,144,381,650	4,154,819,309	18,299,200,959
2030	12.71	3.14	15.85	4,049,558,103	641,854,959	14,400,926,377	4,199,952,649	18,600,879,026
2031	12.75	3.05	15.80	4,203,032,771	664,079,178	14,642,583,143	4,232,418,847	18,875,001,990
2032	12.78	2.98	15.76	4,364,200,305	687,797,968	14,870,025,526	4,252,754,181	19,122,779,707
2033	12.80	2.92	15.72	4,533,230,771	712,623,877	15,085,443,117	4,259,109,372	19,344,552,489

KENTUCKY RETIREMENT SYSTEMS INVESTMENT PROGRAM



The KRS Investment Function

- **Under Kentucky Revised Statute 61.650, the KRS Board of Trustees (the Board) has the “... exclusive power to invest and reinvest... (the Systems’ funds)... in accordance with federal law.”**
- **The Board is required by statute to establish an Investment Committee**
 - Two (2) members must be the two trustees with investment experience appointed by the Governor.
 - Three (3) members are appointed by the Board chair.
- **The Investment Committee has the authority to implement the investment policies adopted by the Board and to “... act on behalf of the Board on all investment-related matters and to acquire, sell, safeguard, monitor, and manage the assets and securities of the several funds.”**
- **The KRS Chief Investment Officer supervises the KRS Investment Division and reports to the Investment Committee and the Executive Director (for administrative purposes).**

Staff Educational Qualifications

(9 Professional Staff and 1 Administrative Assistant)

- **Traditional Education – Advanced Degrees**
 - 4 MBA's
 - 1 MS Finance
- **Industry Certifications**
 - 3 Chartered Financial Analyst (CFA) Charterholders
 - 1 CFA Candidate (6 covered by CFA Code of Ethics)
 - 2 Chartered Alternative Investment Analysts (CAIA)
 - 1 CAIA Candidate

Investment Consultants



RVKuhns – General Consultant



Albourne – Absolute and Real Return



ORG – Real Estate



PCA – Private Equity

Public Asset Investment Managers

US PUBLIC EQUITY

INTERNAL MID CAP –Passive ETF
INVESCO - Large Cap Quantitative
NTGI STRUCTURED - Small Cap Core
RIVER ROAD - All Cap Value
S&P 500 INDEX – Internal Large Cap Passive
SASCO CAPITAL – Mid Cap Value
SYSTEMATIC - Mid Cap Value
WESTFIELD CAPITAL - All Cap Growth
WESTWOOD MGMT - All Cap Value

NON-US EQUITY

AMERICAN CENTURY – Non US Equity
BLACKROCK ACWI EX-US – Non US Equity Passive
BOSTON CO NON-US VALUE – Non US Equity
BLACKROCK ACWI EX-US SM CAP – Non US Equity
Passive Small Cap
FRANKLIN TEMPLETON – Non US Equity
LAZARD ASSET MANAGEMENT – Non US Equity
LSV ASSET MANAGEMENT– Non US Equity
NTGI INTL SM CAP –Non US Equity Small Cap
*PYRAMIS NON-US GROWTH – Non US Equity

EMERGING MARKETS

ABERDEEN – Emerging Markets
BLACKROCK EMERG MKETS – Emerging
Markets Passive
WELLINGTON – Emerging Markets

FIXED INCOME

CERBERUS – High Yield
COLUMBIA - High Yield
LOOMIS - High Yield
MANULIFE ASSET MGMT - Global
NISA - Core
**PIMCO – Core/ Global
SHENKMAN CAP - High Yield
STONE HARBOR – Emerging Market Debt
WATERFALL - High Yield

*Pyramis was terminated as of February 2015

**PIMCO was terminated as of February 2015

Private Asset Investment Managers

REAL RETURN

AMERRA AGRI FUND II
BTG PACTUAL
INTERNAL TIPS
MAGNETAR MTP
OBERLAND CAPITAL
PIMCO ALL ASSET
TORTOISE CAPITAL
TPF II
WEAVER TIPS

ABSOLUTE RETURN

BAAM
HBK II
JANA PARTNERS
KNIGHTHEAD
LIBREMAX CAPITAL
LUXOR CAPITAL
PAAMCO
PINE RIVER
PRISMA CAPITAL
SCOPIA PX LLC

REAL ESTATE

DIVCOWEST IV
FHA MORTGAGES
GREENFIELD ACQ VI
GREENFIELD ACQ VII
H/2 CORE RE DEBT FD
H/2 CREDIT PARTNER
HARRISON STREET
LUBERT-ADLER VII
MESA WEST CORE LEND
MESA WEST RE INC II
PRIMA MORTGAGE
PROLOGIS TUSL
RUBENSTEIN PF II
STOCKBRIDGE
WALTON ST RE FD VI
WALTON ST RE FD VII

PRIVATE EQUITY

Private Equity Buyout

ARBOR CAPITAL II, L.P.
ARCANO KRS FUND I, L.P.
BAY HILLS CAPITAL I, L.P.
BAY HILLS CAPITAL II, L.P.
BAY HILLS CAPITAL III, L.P.
BLACKSTONE CAPITAL PARTNERS V, L.P.
BLACKSTONE CAPITAL PARTNERS VI, L.P.
CAMELOT OPPORTUNITIES FUND, L.P.
CRESTVIEW PARTNERS II, L.P.
CVC EUROPEAN EQUITY PARTNERS VI, L.P.
GREEN EQUITY INVESTORS IV, L.P.
GREEN EQUITY INVESTORS V, L.P.
GREEN EQUITY INVESTORS VI, L.P.
GTCR FUND IX-A, L.P.
H.I.G. CAPITAL PARTNER V, L.P.
HARVEST PARTNERS V, L.P.
HARVEST PARTNERS VI, L.P.
HELLMAN AND FRIEDMAN CAPITAL PARTNERS VI, L.P.
JW CHILDS EQUITY PARTNERS III, L.P.
KEYHAVEN CAPITAL PARTNERS FUND III, L.P.
LEVINE LEICHTMAN CAPITAL PARTNERS V, L.P.
MILL ROAD CAPITAL I, L.P.
NEW MOUNTAIN PARTNERS II, L.P.
NEW MOUNTAIN PARTNERS III, L.P.
OAK HILL CAPITAL PARTNERS II, L.P.
OAK HILL CAPITAL PARTNERS III, L.P.
RIVERSIDE CAPITAL APPRECIATION FUND VI, L.P.
SUN CAPITAL PARTNERS IV
TENASKA POWER FUND II, L.P.
TRITON FUND IV, L.P.
VISTA EQUITY PARTNERS III, L.P.
VISTA EQUITY PARTNERS IV, L.P.
WARBURG, PINCUS PRIVATE EQUITY IX, L.P.
WARBURG, PINCUS PRIVATE EQUITY X, L.P.

Private Equity Debt

AVENUE SPECIAL SITUATIONS FUND V, L.P.
MATLINPATTERSON GLOBAL OPPORTUNITIES PARTNERS
MATLINPATTERSON GLOBAL OPPORTUNITIES PARTNERS II
MATLINPATTERSON GLOBAL OPPORTUNITIES PARTNERS III
MERIT MEZZANINE FUND IV, L.P.
MHR INSTITUTIONAL PARTNERS III, L.P.
OCM OPPORTUNITIES FUND VIIB, L.P.
WAYZATA OPPORTUNITIES FUND II, L.P.
WAYZATA OPPORTUNITIES FUND III, L.P.
WAYZATA OPPORTUNITIES FUND, L.P.

Private Equity Venture

COLUMBIA CAP EQUITY PARTNERS IV, L.P.
DAG VENTURES II, L.P.
DAG VENTURES III, L.P.
DAG VENTURES IV, L.P.
DAG VENTURES V, L.P.
DCM VI, L.P.
ESSEX WOODLANDS FUND VIII, L.P.
H.I.G. BIOVENTURES II, L.P.
H.I.G. VENTURES II, L.P.
HORSLEY BRIDGE INTERNATIONAL FUND V, L.P.
INSTITUTIONAL VENTURE PARTNERS XI, L.P.
INSTITUTIONAL VENTURE PARTNERS XII, L.P.
TCV VI, L.P.
VANTAGEPOINT VENTURE PARTNERS 2006, L.P.
VANTAGEPOINT VENTURE PARTNERS IV, L.P.

Internal vs. External Management

Pension

Internal	\$2,108,986,767	18.41%
External	\$9,345,157,286	81.59%

Insurance

Internal	\$1,023,358,691	25.01%
External	\$3,068,990,584	74.99%

Aggregate

Internal	\$ 3,132,345,459	20.15%
External	\$12,414,147,869	79.85%

KRS Investment Performance

- **Investment performance is a product of asset allocation**
- **The Board's policies establish asset allocation targets based on asset-liability modeling studies that are conducted by independent experts at least once every five years**
- **The objective of the asset allocation policies is to produce returns that meet certain benchmarks, or goals, both on a short-term and long-term basis**
- **In order to meet its objectives, the investment program employs diversification and rebalancing strategies among and within the asset classes**

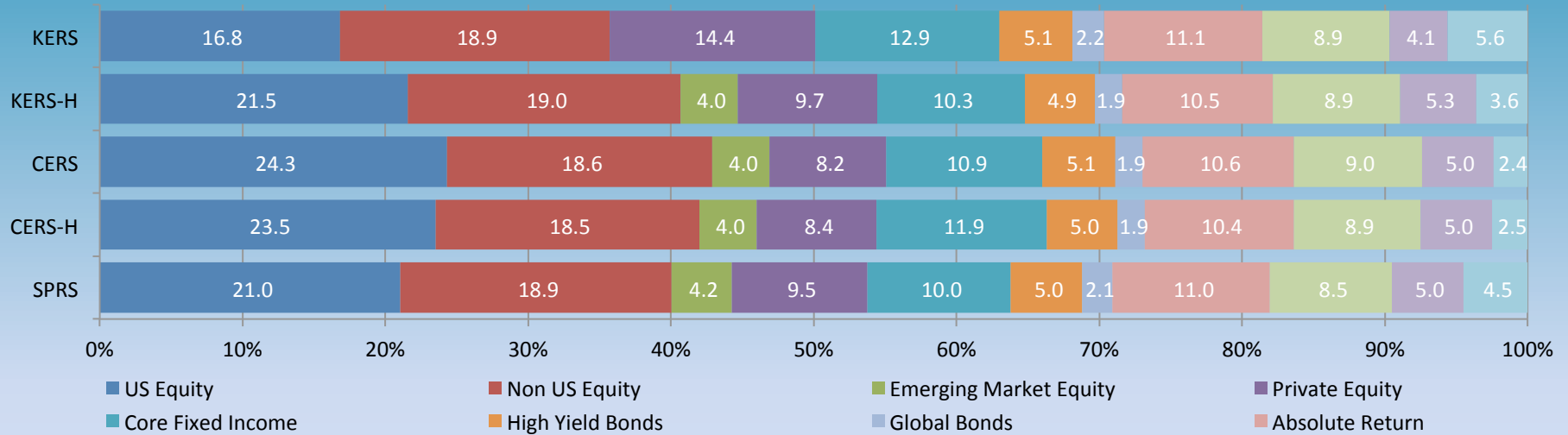
Fiscal and Calendar Year Pension Returns

KRS Pension Fund	
Fiscal Year	Return
1990	11.67
1991	8.24
1992	11.67
1993	12.16
1994	1.02
1995	18.99
1996	17.63
1997	24.16
1998	20.76
1999	14.27
2000	6.42
2001	(5.42)
2002	(4.31)
2003	4.28
2004	13.59
2005	9.25
2006	9.68
2007	15.27
2008	(4.22)
2009	(17.23)
2010	15.76
2011	18.75
2012	0.01
2013	10.82
2014	15.55

KRS Pension Fund	
Calendar Year	Return
1990	1.39
1991	21.79
1992	8.77
1993	7.40
1994	1.24
1995	26.91
1996	16.54
1997	23.27
1998	18.08
1999	14.08
2000	(2.70)
2001	(3.31)
2002	(6.82)
2003	20.02
2004	10.93
2005	6.40
2006	13.98
2007	6.58
2008	(23.92)
2009	19.66
2010	12.70
2011	(0.48)
2012	12.68
2013	12.70
2014	5.14

KENTUCKY RETIREMENT SYSTEMS – PENSION PLAN PERFORMANCE & ALLOCATION - 12/31/14

Pension Plan Allocations

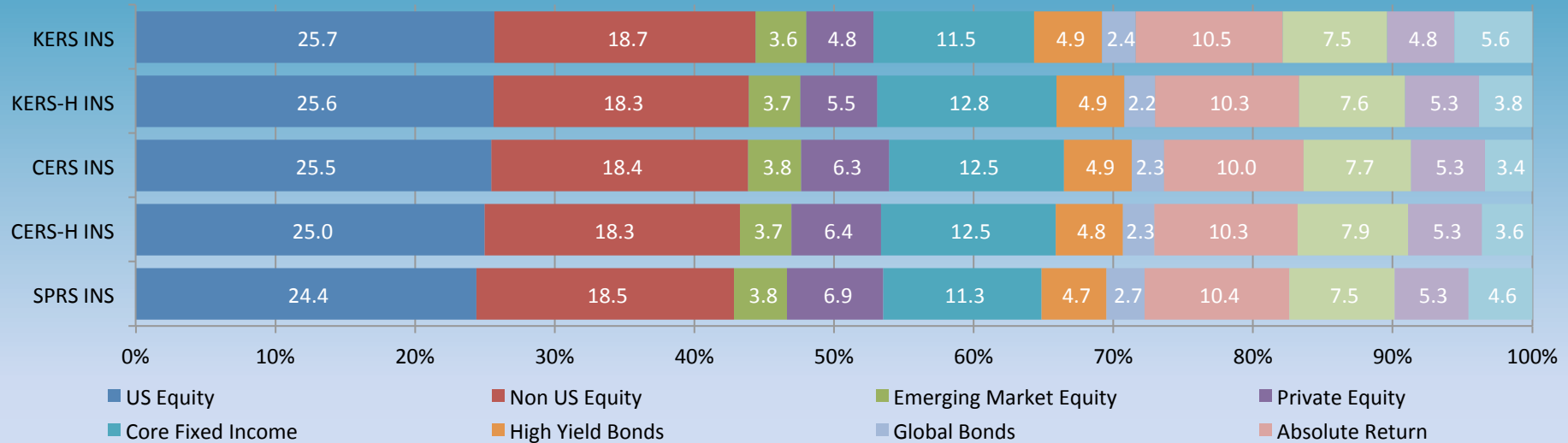


KRS - PENSION

	Month	FYTD	1 YR	3 YR	5 YR	10 YR	ITD
KERS	-0.85	-0.61	5.98	10.23	8.48	5.86	9.41
KERS Plan Index	-0.63	-0.62	5.38	10.75	8.58	5.99	9.52
KERS-H	-0.95	-1.17	4.90	10.08	8.39	5.82	9.40
KHAZ Plan Index	-0.79	-0.79	5.44	10.82	8.62	6.00	9.53
CERS	-0.94	-1.07	4.91	10.08	8.39	5.82	9.40
CERS Plan Index	-0.81	-0.75	5.50	10.84	8.63	6.01	9.53
CERS-H	-0.93	-1.05	4.92	10.07	8.38	5.82	9.40
CHAZ Plan Index	-0.81	-0.75	5.49	10.84	8.63	6.01	9.53
SPRS	-0.97	-1.08	4.96	10.10	8.40	5.83	9.40
SPRS Plan Index	-0.80	-0.81	5.37	10.79	8.60	6.00	9.53

KENTUCKY RETIREMENT SYSTEMS – INSURANCE PLAN PERFORMANCE & ALLOCATION - 12/31/14

Insurance Plan Allocations



KRS - INSURANCE

	Month	FYTD	1 YR	3 YR	5 YR	10 YR	ITD
KERS INS	-0.93	-1.06	4.28	9.32	7.72	5.18	7.48
INS KERS Plan Index	-0.80	-0.52	5.73	10.73	8.90	5.60	7.91
KERS-H INS	-0.88	-0.97	4.51	9.60	7.89	5.27	7.51
INS KHAZ Plan Index	-0.79	-0.52	5.74	10.74	8.91	5.61	7.91
CERS INS	-0.85	-0.95	4.51	9.57	7.87	5.26	7.51
INS CERS Plan Index	-0.78	-0.52	5.73	10.74	8.91	5.61	7.91
CERS-H INS	-0.85	-0.97	4.52	9.56	7.86	5.25	7.51
INS CHAZ Plan Index	-0.78	-0.52	5.73	10.74	8.91	5.61	7.91
SPRS INS	-0.85	-0.99	4.50	9.56	7.86	5.25	7.51
INS SPRS Plan Index	-0.77	-0.53	5.72	10.74	8.91	5.60	7.91

KRS Kentucky-Based Investments

Fixed Income	\$ 3,074,256
Public Equity	\$ 13,684,902
Private Equity	\$ 2,111,621
Real Estate	\$ 9,000,000
Absolute Return	\$ 2,234,515
Real Return	\$ 200,000
Total	\$ 30,305,294

NOTES:

- As of 12/31/14
- Includes only companies or bond issuers headquartered in Kentucky.
- Real estate includes only physical property in Kentucky.
- Some market values are estimated.

KENTUCKY RETIREMENT SYSTEMS ADMINISTRATIVE EXPENSES



Allocation of KRS Administrative Costs

- KRS 61.580 provides the following: “The retirement allowance account shall be the account in which shall be accumulated all employer contributions From this account shall be paid the expenses of the system and the board incurred in administration of the system
- KRS administrative costs are paid from each plan’s Retirement Allowance Account and are allocated based on pro rata share of the System’s total membership. **For the 2014-2015 fiscal year, the membership totals and the Administrative Percentages have been calculated as follows:**

System	Member Count	System Percentage
KERS	119,735	34.3%
KHAZ	9,879	2.82%
CERS	198,837	57.16%
CHAZ	17,293	4.90%
SPRS	2,379	0.80%
TOTALS	348,123	100.00%

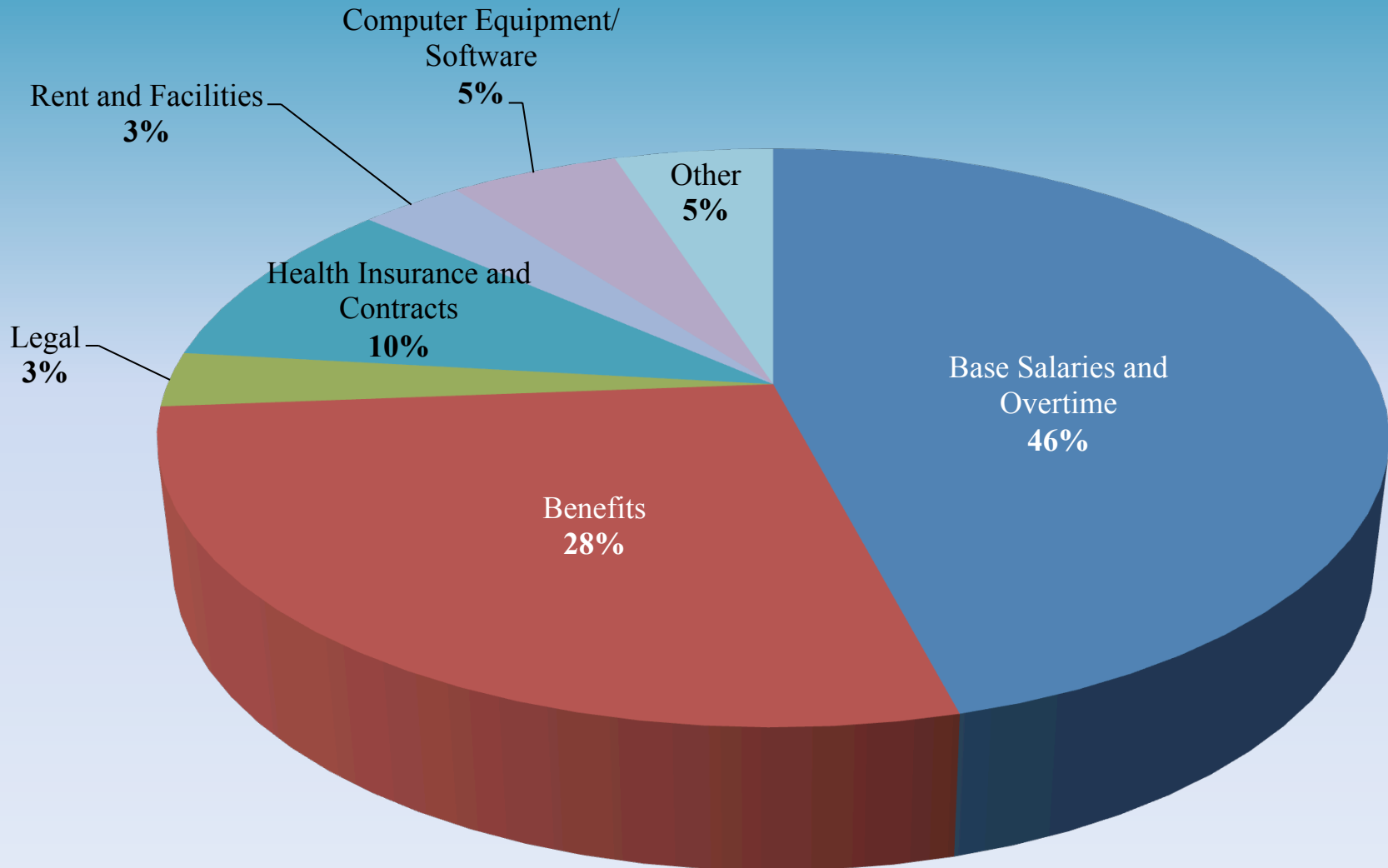
- Total administrative expense for 2015 was \$31.1 million dollars. \$89.08 per member per year.

KRS Actual Administrative Expenses (in \$000's)

Major Expense Categories	2014 – 2015 Actual Expenses	2013 - 2014 Actual Expenses	Comments
Base Salaries and OT	\$14,292	\$14,111	Backlog Reduction Effort
Benefits	8,655	6,867	Insurance and Pension
Legal	954	2,494	<i>Seven Counties</i> litigation
Auditing	108	76	GASB 68 Reviews (APA and DDF)
Health Insurance and Contracts	3,013	4,080	Health and Investment Fees
Actuarial Services	337	521	Senate Bill 2 reviews
Rent and Facilities	1,004	1,003	
Postage and Printing	382	903	Transition to Electronic Distribution
Travel	54	73	
Computer Equipment/Software	1,646	2,437	Disaster Recovery Mitigation and Call Back Assist
All Other	565	429	
TOTAL	\$31,010	\$32,994	

KRS Administrative Expenses 2014 - 2015

(As a Percent of Total)



Actuarial Basics

- **Funding Level**

- Ratio of Actuarial Assets to Actuarial Liabilities
- Measure of the plan's financial soundness
- Provides a “snapshot” of the plan's ability to meet liabilities (benefits) earned to date
- Actuarial funding level is based on a 5-year smoothing method, i.e. 20% of market gains/losses are recognized each year over a 5-year period

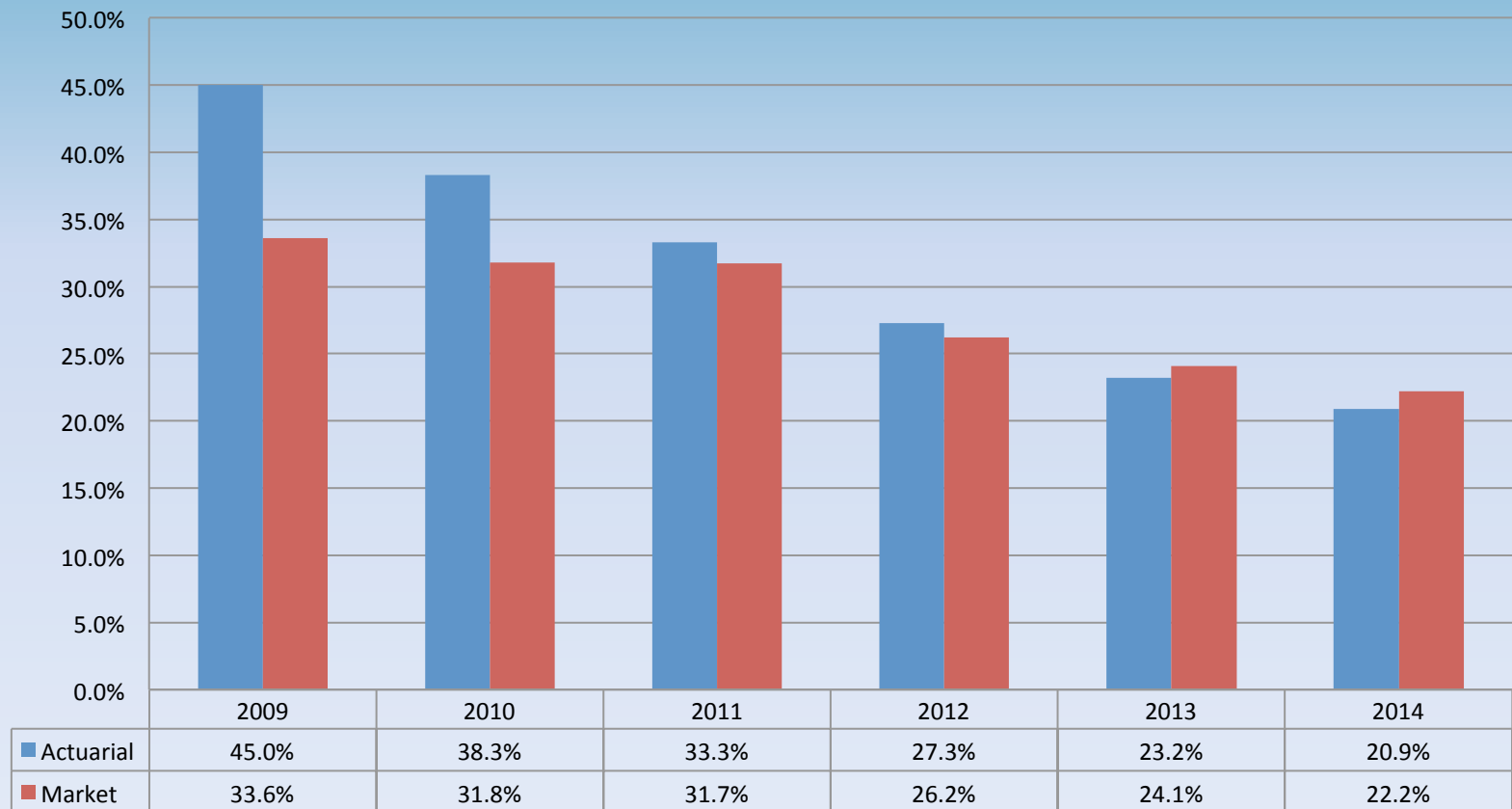
Combined Funded Status

Fund	June 30, 2014			June 30, 2013		
	Pension	Insurance	Combined	Pension	Insurance	Combined
KERS Non-Hazardous	21.0%	27.9%	22.1%	23.2%	23.4%	23.2%
KERS Hazardous	64.6%	105.6%	78.0%	64.5%	96.2%	74.9%
CERS Non-Hazardous	62.6%	70.0%	64.2%	60.1%	66.6%	61.5%
CERS Hazardous	59.8%	66.8%	62.0%	57.7%	62.1%	59.1%
SPRS	35.6%	66.4%	43.5%	37.1%	61.3%	43.3%

Actuarial Basics

Summary of Actuarial Funding Level (2009 – 2014)

KERS Non-Hazardous PENSION



Source: June 30, 2014 Comprehensive Annual Financial Report

Actuarial Basics

Summary of Actuarial Funding Level (2009 – 2014)

KERS Non-Hazardous INSURANCE

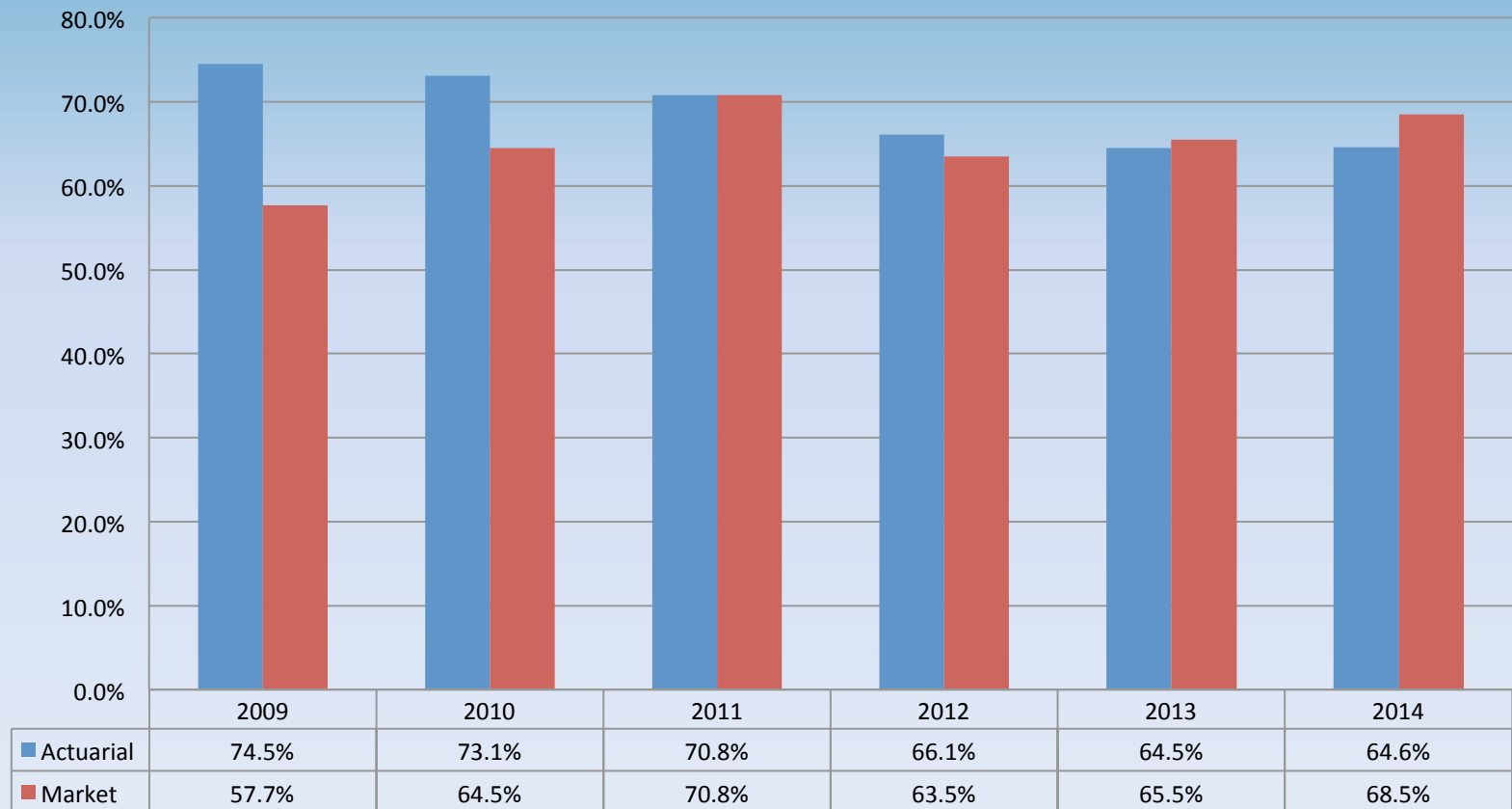


Source: June 30, 2014 Comprehensive Annual Financial Report

Actuarial Basics

Summary of Actuarial Funding Level (2009 – 2014)

KERS Hazardous PENSION



Source: June 30, 2014 Comprehensive Annual Financial Report

Actuarial Basics

Summary of Actuarial Funding Level (2009 – 2014)

KERS Hazardous INSURANCE

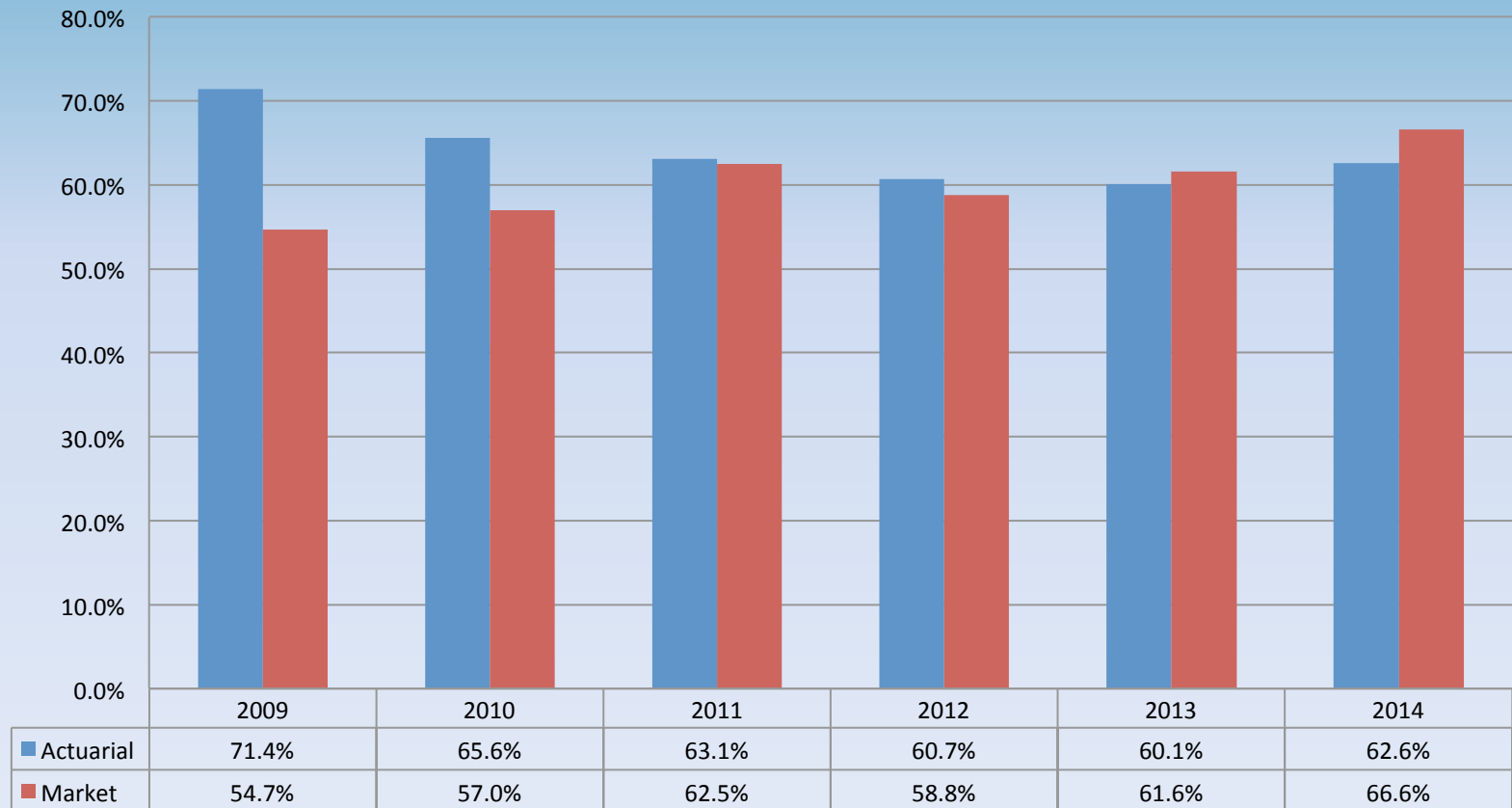


Source: June 30, 2014 Comprehensive Annual Financial Report

Actuarial Basics

Summary of Actuarial Funding Level (2009 – 2014)

CERS Non-Hazardous PENSION



Source: June 30, 2014 Comprehensive Annual Financial Report

Actuarial Basics

Summary of Actuarial Funding Level (2009 – 2014)

CERS Non-Hazardous INSURANCE



Source: June 30, 2014 Comprehensive Annual Financial Report

Actuarial Basics

Summary of Actuarial Funding Level (2009 – 2014)

CERS Hazardous PENSION

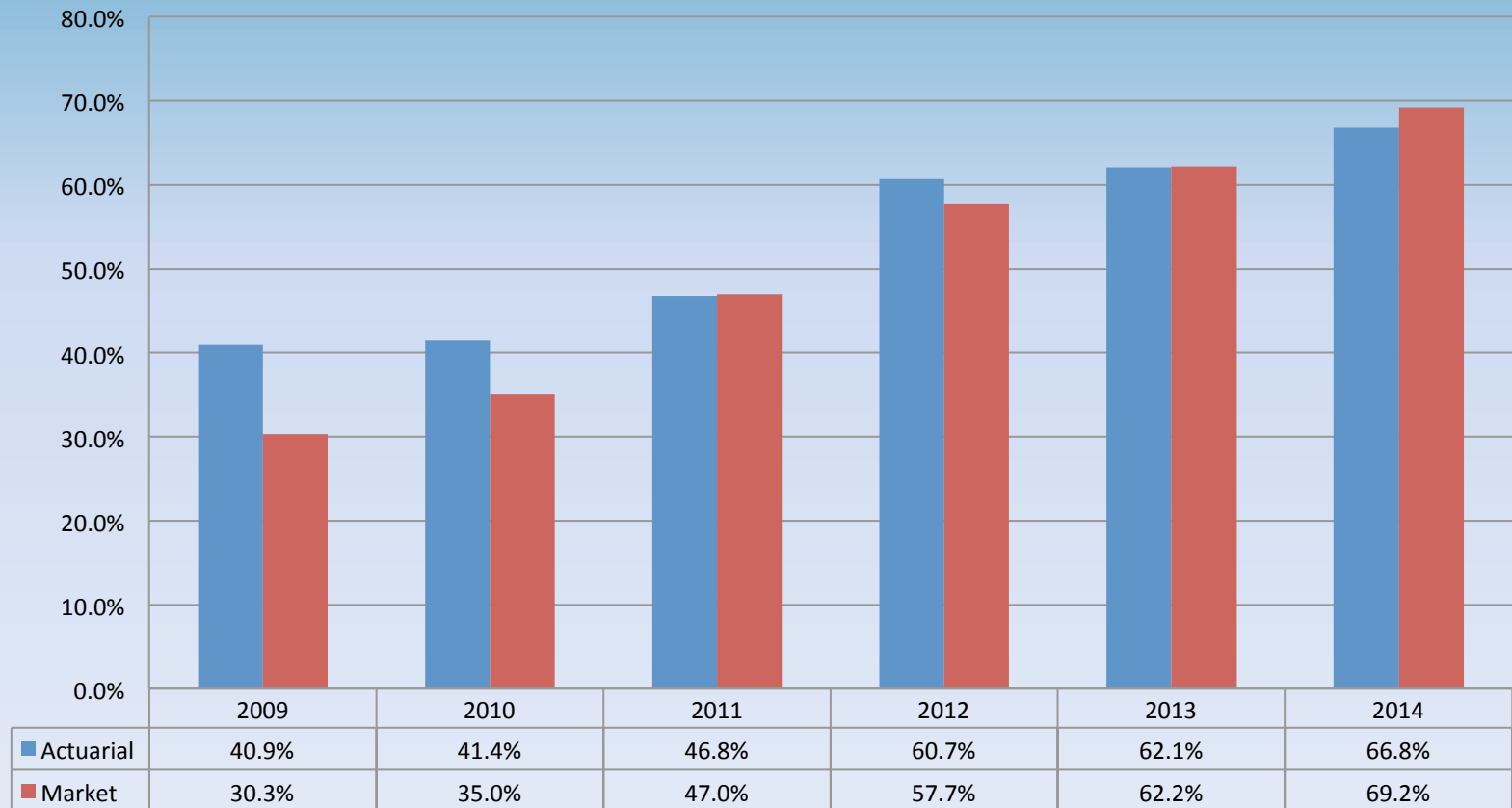


Source: June 30, 2014 Comprehensive Annual Financial Report

Actuarial Basics

Summary of Actuarial Funding Level (2009 – 2014)

CERS Hazardous INSURANCE

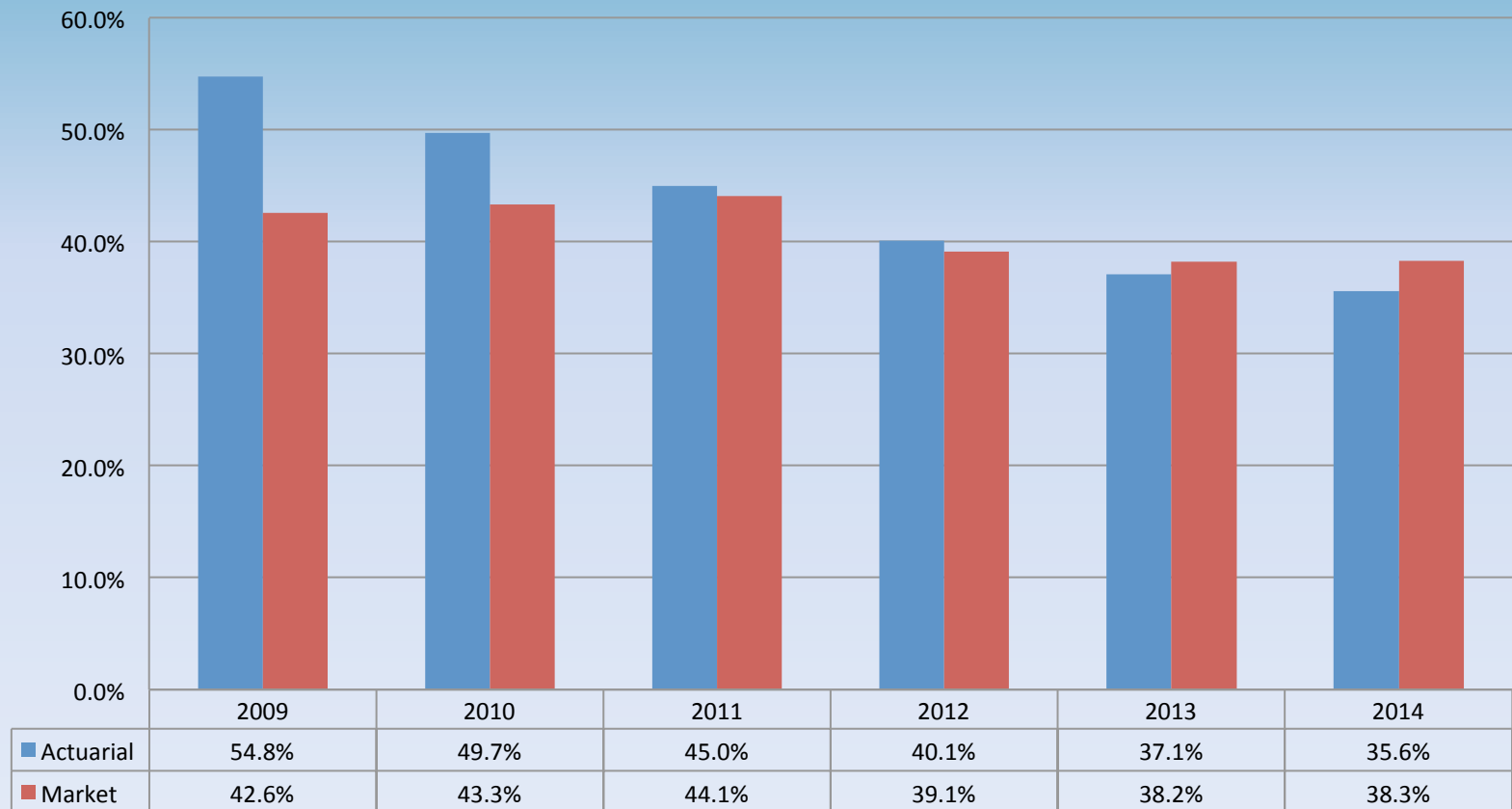


Source: June 30, 2014 Comprehensive Annual Financial Report

Actuarial Basics

Summary of Actuarial Funding Level (2009 – 2014)

State Police Retirement System PENSION



Source: June 30, 2014 Comprehensive Annual Financial Report

Actuarial Basics

Summary of Actuarial Funding Level (2009 – 2014)

State Police Retirement System INSURANCE



Source: June 30, 2014 Comprehensive Annual Financial Report

Actuarial Basics

- **Unfunded Actuarial Liability (UAL)**
 - Difference between current value of assets and liabilities
 - Represents the unfunded liability on benefits already earned by employees and retirees
 - UAL is amortized over a 30 year or shorter period, much like a home mortgage
 - The amortized payment is a part of the employer contribution rate

KERS/SPRS 2014 Unfunded Liabilities

(in billions of dollars)

	2014			2013		
System	Pension	Insurance	Combined	Pension	Insurance	Combined
KERS Non-Hazardous	\$9.13	\$1.61	\$10.74	\$8.75	\$1.63	\$10.38
KERS Hazardous	\$0.29	(\$0.02)	\$0.27	\$0.28	\$0.01	\$0.29
SPRS	\$0.44	\$0.08	\$0.52	\$0.41	\$0.09	\$0.50
TOTAL	\$9.86	\$1.67	\$11.53	\$9.44	\$1.73	\$11.17

Source: June 30, 2014 Actuarial Valuation

CERS 2014 Unfunded Liabilities

(in billions of dollars)

	2014			2013		
System	Pension	Insurance	Combined	Pension	Insurance	Combined
CERS Non-Hazardous	\$3.66	\$0.79	\$4.45	\$3.74	\$0.82	\$4.56
CERS Hazardous	\$1.32	\$0.50	\$1.82	\$1.32	\$0.54	\$1.86
TOTAL	\$4.98	\$1.29	\$6.27	\$5.06	\$1.36	\$6.42

Source: June 30, 2014 Actuarial Valuation

What Caused the Increase in Unfunded Liabilities?

- 1. Reductions to Employer Contribution Rates in KERS and SPRS**
- 2. Retiree COLA increases not pre-funded**
- 3. 2008-2009 Market Losses**
- 4. Cost Inflation for Retiree Insurance**
- 5. Compliance with GASB 43/45 (2006)**
- 6. Demographic losses**

KERS Unfunded Liability Attribution

Actuary Prepared Attribution of Unfunded Liability: KERS Non-Hazardous Pension Plan

Fiscal Year	Unfunded Actuarial Liability (Beg. Of Year)	Investment (G) / L	COLA	Benefits	Actuarial Assumptions	Employer Contribution Shortfall	Demographic & Salary Experience	Other	Unfunded Actuarial Liability (End of Year)
2008	4,089	12	245	0	0	179	128	158	4,811
2009	4,811	308	205	-45	-12	198	131	269	5,864
2010	5,864	324	102	0	0	216	-37	326	6,795
2011	6,795	243	113	0	0	221	-129	212	7,455
2012	7,455	325	117	0	0	236	-53	180	8,260
2013	8,260	166	0	0	0	249	-18	94	8,751
2014	8,751	-129	0	0	0	224	68	212	9,126

Total Increase	1,249	782	-45	-12	1,522	90	1,451	
Attribution %	24.79%	15.50%			30.21%	1.78%	28.80%	100.0%

CERS Unfunded Liability Attribution

Actuary Prepared Attribution of Unfunded Liability: CERS Non-Hazardous Pension Plan

Fiscal Year	Unfunded Actuarial Liability (Beg. Of Year)		Investment (G) / L	COLA	Benefits	Actuarial Assumptions	Demographic & Salary Experience	Other		Unfunded Actuarial Liability (End of Year)
2008	1,192		28	129	0	0	83	141		1,573
2009	1,573		344	101	0	44	36	165		2,262
2010	2,262		354	55	0	0	7	235		2,912
2011	2,912		230	62	0	0	35	49		3,288
2012	3,288		341	71	0	0	-71	-37		3,592
2013	3,592		165	0	0	0	29	-44		3,742
2014	3,742		-219	0	0	0	83	49		3,655

Total Increase	1,243	418	0	44	202	556	
Attribution %	50.46%	16.97%	0.00%	1.78%	8.20%	22.57%	100.0%

Retiree Cost of Living Adjustment (COLA)

- The 1996 General Assembly enacted an automatic cost of living adjustment (COLA) provision for all recipients of KRS benefits
- During the 2008 Special Session, the General Assembly determined that each July beginning in 2009, retirees who have been receiving a retirement allowance for at least 12 months will receive an automatic COLA of 1.5%
- Statute does not allow pre-funding: the COLA becomes an unfunded liability for a 30 year amortization period
- **COLAs are NOT guaranteed by the inviolable contract language in state law:** the General Assembly has the right to reduce, suspend, or eliminate the COLA
- The General Assembly suspended COLAs for FY 2012-13 and FY 2013-14 per the State Executive Branch Budget bill (HB 265, 2012 RS)
- SB 2 (2013 RS) now only permits COLAs for retirees under two scenarios:
 1. If the particular system for which the COLA is provided...
 - Is Greater than 100% funded, *and*
 - The COLA will not reduce the funding level of the system below 100%, *and*
 - The COLA is authorized by the legislature to be paid using surplus funds
 2. OR if the legislature prefunds the COLA

Estimated Cost of Providing 1.50% *ad hoc* COLA for Retirees effective July 1, 2010

System	Actuarial Accrued Liability ("AAL") as of June 30, 2009			Recommended Contribution Rate for the 2010-2011 Fiscal Year		
	Current AAL	1.50% <i>ad hoc</i> COLA AAL	Increase in AAL	Current Rate	1.50% <i>ad hoc</i> COLA Rate	Increase in Rate
KERS Non-hazardous	\$10,658,549,532	\$10,767,315,997	\$108,766,465	21.77%	22.10%	0.33%
KERS Hazardous	\$674,411,781	\$679,794,629	\$5,382,848	14.11%	14.30%	0.19%
CERS Non-hazardous	\$7,912,913,512	\$7,970,525,408	\$57,611,896	10.03%	10.17%	0.14%
CERS Hazardous	\$2,578,444,600	\$2,599,088,114	\$20,643,514	16.79%	17.02%	0.23%
SPRS	\$602,328,868	\$608,536,751	\$6,207,883	35.74%	36.37%	0.63%
TOTAL INCREASE in Actuarial Accrued Liability:				\$198,612,606		

Source: July 7, 2010 letter from Cavanaugh Macdonald Consulting, LLC

Required Contribution to Fully Fund 1.5% COLA's

Fund	Payable	
	July 1, 2014	July 1, 2015
KERS Non-Hazardous	\$126,831,924	\$128,526,660
KERS Hazardous	8,030,529	8,219,212
CERS Non-Hazardous	83,576,350	87,745,155
CERS Hazardous	30,503,466	31,880,174
State Police Retirement System	8,002,669	8,065,453

Source: January 2, 2014 Letter from Cavanaugh Macdonald Consulting, LLC

What Action Has Already Been Taken to Address These Issues?

- Board completed a full review in 2003 and offered several considerations to the Legislature as it relates to benefits for future employees
- Many of these options for new hires were implemented into law by **HB 290** (2004 GA)
- Savings from these changes were estimated by KRS staff to amount to \$2.25 billion dollars realized over a 20 year period as current employees are replaced by new employees covered under the new benefits provisions

What Action Has Already Been Taken to Address These Issues?

2004 Changes:

- *Employees hired on or after July 1, 2003 earn health insurance benefits based upon dollar value*
 - *Non-Hazardous: \$10/month for each year of actual service*
 - *Hazardous: \$15/month for each year of actual service*
- *Purchases*
 - *Purchases after 8/1/2004 do not count towards vesting for health insurance benefits*
 - *Purchases made by new hires after 8/1/2004 will not count towards vesting for retirement eligibility*
 - *Purchase factor methodology reviewed and amended in 2005*

What Action Has Already Been Taken to Address These Issues?

2006 Actuarial Experience Study:

- Modified actuarial assumptions related to retiree health premium increases, retirement rates, and life expectancies will increase rates
- Eventually, GASB 43/45 and changes in actuarial assumptions (including the expected continuation of retiree health premium inflation) and COLAs will exceed changes made to stabilize rates

What Action Has Already Been Taken to Address These Issues?

2008 Changes:

- **House Bill 1** (2008 Special Session) made significant changes to retirement benefits for employees who begin participating with KRS on or after September 1, 2008
- **HB 1** also had provisions affecting current employees and retirees
 - COLA at 1.5% instead of based on CPI-U
 - Service Purchase costs now include COLA and are calculated on earliest retirement date member can retire with an unreduced benefit
 - Retired/reemployed changes for employees returning to work on or after September 1, 2008 regardless of the employee's retirement date
- **HB 1** amended KRS 61.565 to create a phase-in schedule for paying 100% of the Actuarially Required Contribution rates
 - If the General Assembly adheres to the schedule, all participating agencies will be required to pay the full employer contribution by 2025

What Action Has Already Been Taken to Address These Issues?

2013 Changes:

- **Senate Bill 2 (2013 Regular Session) created a hybrid cash balance plan for employees who begin participating with KRS on or after January 1, 2014**
 - Retirement benefits will be based upon the member's accumulated account balance, which includes:
 - Employee Contributions
 - Employer Pay Credit
 - Interest paid on the Employee Contribution and the Employer Pay Credit
 - Interest based on the fund's geometric investment returns

What Action Has Already Been Taken to Address These Issues?

2013 Changes:

- **For members participating on or after January 1, 2014, Service Credit purchases are limited to:**
 - Recontribution of Refund
 - Omitted
 - Omitted with Interest
 - Military Omitted
 - USERRA
 - Decompression
- **SB 2 removed the phase-in schedule for paying 100% of the Actuarially Required Contribution rates**
 - The General Assembly is required to pay the full actuarially required contribution rates in Fiscal Years occurring on or after July 1, 2014

What Action Has Already Been Taken to Address These Issues?

2013 Changes:

- **SB 2 also had provisions affecting current employees and retirees**
 - Recontributions of Refunds made on or after January 1, 2014 will **not** be used to determine a member's participation date in the system
 - COLA for retirees only permitted under two scenarios:
 1. If the particular system for which the COLA is provided...
 - Is Greater than 100% funded, *and*
 - The COLA will not reduce the funding level of the system below 100%, *and*
 - The COLA is authorized by the legislature to be paid using surplus funds
 2. OR if the legislature prefunds the COLA

What Action Has Already Been Taken to Address These Issues?

2013 Changes:

- **SB 2 also had provisions affecting current employees and retirees**
 - Authorizes the KRS Board to establish a
 - **Health Savings Account**
 - **Health Reimbursement Account, *or***
 - A program through which members may purchase coverage through a **Health Insurance Exchange**

Near Term Challenges Facing KRS

- **Plan Funding – KERS Nonhazardous & SPRS**
- **Implementation of HB 62 – Participating Employer Withdrawal**
- **Resolving Pension Spiking Issues**
- **Implementation of GASB Standards 74 and 75 (OPEB – Health Insurance – Reporting and Accounting)**
- **Seven Counties Bankruptcy and Other Mental Health/Mental Retardation Board cases**
- **Budgetary and Staffing Constraints**

KENTUCKY RETIREMENT SYSTEMS



Questions and Comments

CONTACT INFORMATION



KENTUCKY RETIREMENT SYSTEMS

1260 Louisville Road
Frankfort, KY 40601

<https://kyret.ky.gov>

In Frankfort **502-696-8800** Or toll free **1-800-928-4646**